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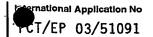
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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SPLICED VARIANTS OF LGR6

(57) Abstract: The present invention provides Leucine-Rich Repeat-Containing G-Protein Coupled Receptor-6 (LGR6-SVs) polypeptides and nucleic acid molecules encoding the same. The invention also provides selective binding agents, vectors, host cells, and methods for producing LGR6-SVs polypeptides. The invention further provides pharmaceutical compositions and methods for the diagnosis, treatment, amelioration, and/or prevention of diseases, disorders, and conditions associated with LGR6-SVs polypeptides.





A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07K14/705 C07K16/28 G01N33/68 A61K39/395 C12N15/12
A61K38/17 G01N33/50 C12N15/62 A61K48/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 CO7K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, EMBASE, BIOSIS, EMBL

Category °	Citation of document, with Indication, where appropriate, of the relevant passages	Relevant to claim No.
Χ	WO 02/068651 A (PE CORP NY) 6 September 2002 (2002-09-06)	1-24,26, 27, 29-32,34
Υ .	SEQ ID NO:4,5,7 page 22 - page 56; claims 3,8-11,13,14,16-19	25
X	DATABASE EMBL 2 November 2002 (2002-11-02), STRAUSBERG R L ET AL: "Homo sapiens, Similar to rickets, clone IMAGE:5220507, mRNA." XP002285050 Database accession no. BC038795 abstract	1-5,7,11
	-/	

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χ Further documents are listed in the continuation of box C.	χ Patent family members are listed in annex.
Special categories of cited documents: A* document defining the general state of the art which is not considered to be of particular relevance E* earlier document but published on or after the international filing date L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) O* document referring to an oral disclosure, use, exhibition or other means P* document published prior to the international filing date but later than the priority date claimed	 *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family
Date of the actual completion of the international search 23 June 2004	Date of mailing of the international search report 12/07/2004
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Gruber, A

International Application No FCT/EP 03/51091

		FCI/EP 03/51091		
C.(Continua	etion) DOCUMENTS CONSIDERED TO BE RELEVANT			
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X Y	WO 01/85768 A (GU WEI ; MILLENNIUM PHARM INC (US)) 15 November 2001 (2001-11-15) page 50 - page 104; claims 3,5-7,11,12,15,19-22; example 1; sequences 4,7,10,11	1-24, 26-34 25		
X	WO 02/29038 A (RASTELLI LUCA ; CURAGEN CORP (US); HERRMANN JOHN L (US); SHIMKETS RICH) 11 April 2002 (2002-04-11) page 60 - page 127; claims 12-14,22,23; tables 3A,3B,3D	1-24, 26-34		
P,X .	DATABASE EMBL 21 March 2003 (2003-03-21), STRAUSBERG R: "Homo sapiens, clone IMAGE:5212508, mRNA, partial cds." XP002285051 Database accession no. BC047905 abstract	1-4,8,9, 11,13, 14,26		
A	EP 0 950 711 A (AKZO NOBEL NV) 20 October 1999 (1999-10-20) the whole document	·		
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	·	. •		

nternational application No. PCT/EP 03/51091

Box I Obs	servations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This Internation	onal Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
beca	ms Nos.: ause they relate to subject matter not required to be searched by this Authority, namely: e FURTHER INFORMATION sheet PCT/ISA/210
2. Clair beca an e	ms Nos.: ause they relate to parts of the International Application that do not comply with the prescribed requirements to such extent that no meaningful International Search can be carried out, specifically:
	ms Nos.: ause they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Obs	servations where unity of invention is lacking (Continuation of item 2 of first sheet)
This Internation	onal Searching Authority found multiple inventions in this international application, as follows:
	all required additional search fees were timely paid by the applicant, this international Search Report covers all rchable claims.
2. Asa	all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment ny additional fee.
3. As c	only some of the required additional search fees were timely paid by the applicant, this international Search Report ers only those claims for which fees were paid, specifically claims Nos.:
4. No rest	required additional search fees were timely paid by the applicant. Consequently, this International Search Report is tricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on l	Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

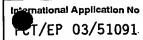
Continuation of Box I.1

Although claim 22 is directed to a diagnostic method practised on the

human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Although claims 19, 34 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

page 2 of 2



Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 02068651	A	06-09-2002	CA	2439190 A1	06-09-2002
WO 05500001	,,	00 03 2002	EΡ	1370658 A2	17-12-2003
•			WO.	02068651 A2	06-09-2002
			ÜS	2003074678 A1	17-04-2003
WO 0185768	Α	15-11-2001	AU	6302001 A	20-11-2001
			EP	1285064 A2	26-02-2003
			WO	0185768 A2	15-11-2001
			US	2004058377 A1	25-03-2004
			US	2003166047 A1	04-09-2003
WO 0229038	Α	11-04-2002	 AU	1150202 A	15-04-2002
			AU	3039102 A	29-04-2002
			AU	4149001 A	27-08-2001
•			CA	2400332 A1	23-08-2001
			CA	2423677 A1	11-04-2002
			EP	1255835 A2	13-11-2002
		1	ĒΡ	1356043 A2	29-10-2003
		•	JP	2003527108 T	16-09-2003
	•		WO	0161008 A2	23-08-2001
	•		WO	2004009634 A2	29-01-2004
	•		WO	0229038 A2	11-04-2002
			WO	0232961 A2	25-04-2002
			ÜS	2004010120 A1	15-01-2004
		•	US	2003216308 A1	20-11-2003
			US	2002037850 A1	28-03-2002
			US	2002037030 A1 2003077774 A1	24-04-2003
			US	2003204052 A1	30-10-2003
	Α	20-10-1999	EP	0950711 A2	 20-10-1999
EP 0950711					